

Appl. No. 09/998,724
Amdt. dated 11/21/06
Reply to Office action of 8/31/06

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-7, 14 and 17-20 are now in the application. Claims 5-7, 14 and 17-20 are subject to examination and claims 1-4 have been withdrawn from examination. No claims have been amended or added.

Claims 11, 13, 16, 25 and 27-28 have been canceled herein without prejudice, while retaining the right to introduce those claims in this or a Divisional Application at a later date.

In "Claim Rejections - 35 USC § 102," item 1 on pages 2-3 of the above-identified Office Action, claims 11, 16, 25 and 27-28 have been rejected as being fully anticipated by U.S. Patent No. 5,714,103 to Bauer et al. (hereinafter Bauer) under 35 U.S.C. § 102(b).

In "Claim Rejections - 35 USC § 103," item 2 on pages 3-4 of the Office Action, claims 5-7, 14 and 17-20 have been rejected as being obvious over Bauer in view of U.S. Patent No. 5,474,746 to Maus et al. (hereinafter Maus '746) under 35 U.S.C. § 103(a).

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In "Claim Rejections - 35 USC § 103," item 3 on page 5 of the Office Action, claim 13 has been rejected as being obvious over Bauer in view of U.S. Patent No. 5,514,347 to Ohashi et al. under 35 U.S.C. § 103(a).

It is noted that the claims rejected in items 1 and 3 of the Office Action have been canceled and therefore only the rejection in item 2 will be discussed herein.

As will be explained below, it is believed that claims 5-7, 14 and 17-20 were patentable over the cited art in their previous form and, therefore, the claims have not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 5 calls for, *inter alia*, a honeycomb body, comprising:

ceramic walls all being entirely formed of printed layers forming channels through which a fluid can flow, said channels lying next to one another; and

at least one of at least one measuring sensor and an electrically conductive mass integrated into one of said ceramic walls.

Accordingly, claim 5 calls for ceramic walls all being entirely formed of printed layers, and a honeycomb body

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having a measuring sensor or an electrically conductive mass integrated into one of its ceramic walls.

The Bauer reference discloses a process for the production of a porous shaped article from a composition which can undergo plastic deformation and solidification. In particular, Bauer relates to articles having a three-dimensional inter-connecting pore system such as, for example, implants, bones and filter bodies or static mixers for gases or liquids. In view of the materials that can be used for that process, Bauer explains that various materials are suitable for building up the porous shaped articles in layers.

However, there is no hint that, in particular in view of honeycomb structures, separate areas with different materials are to be generated in the Bauer process. Accordingly, Bauer only relates to structures being built up with the same mixture of different materials.

In the Response to Arguments on page 6 of the Office Action, the Examiner has stated with regard to Bauer:

(2) With respect to the argument of Bauer et al. '103 fails to disclose the first and second masses disposed in printed layers and having different properties, Examiner respectfully disagrees. It is submitted that Bauer discloses the process of shaping the object by forming from printed layers (Col. 3, lines 5-15) and

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Bauer further discloses the process for production of shaped articles can be applied to virtually all materials which can undergo plastic deformation and then solidified in layers (Col. 4, lines 48-52). Therefore, applying different masses in printed layers does not limit the scope of Bauer's invention.

Analyzing the Examiner's comments, it can be seen that the Examiner acknowledges Applicant's argument that Bauer fails to disclose first and second masses with different properties. Then the Examiner states that Bauer's process can be applied to all material that can be plastically deformed and then solidified. However, it is not understood how the ability to use Bauer's process for different materials makes it obvious from Bauer to provide masses with different properties within the same article.

It must be understood that although Bauer can use different materials, he cannot use two different materials in the same article. If Bauer mixes materials, the same mixture is used everywhere. Claim 5 of the instant application calls for at least one measuring sensor and an electrically conductive mass integrated into one of the ceramic walls. Therefore, two different elements are integrated into one of the ceramic walls. At most, Bauer could only provide two of the same elements in one wall and then two of the same elements in another wall ~ but never two different elements in the same

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wall.

Maus discloses a catalyst carrier body, wherein thin metal foils are used as upper and lower layers. Those foils form a void in which a heat conductor, a temperature sensor or a supply line can be laid. In view of the completely different methods for the production of such honeycomb structures in Bauer and Maus, a person of skill in the art would have never combined these two documents. Additionally, the Maus reference clearly points in the direction of first manufacturing the walls of the honeycomb body (the foils) with voids or structures, before the sensor is positioned between two corresponding shaped foils. This teaches, in view of Bauer, that first the walls of the ceramic honeycomb structure need to be manufactured according to a printing method, and afterwards the sensor has to be positioned between two such printed layers before the honeycomb structure is finally formed. Since the printed layers have to be solidified before they can be positioned with respect to each other, the teaching of Maus clearly destroys the concept of the Bauer reference.

In the Response to Arguments on pages 5-6 of the Office Action, the Examiner has stated with regard to Maus:

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(1) With respect to Applicant's argument of Maus '746 fails to teach a sensor or the electrically conductive mass is integrated into one of the ceramic walls, Examiner respectfully disagrees. It is submitted that Bauer et al. '103 discloses ceramic walls is formed with printed layers (Col. 3, lines 15-45 and Col. 4, lines 17-59) but fail to disclose a sensor or electrically conductive mass integrated into one of said ceramic walls. It is submitted that Maus '746 teaches not only the sensor and/or heat conductor 17 (Abstract and Col. 2, lines 17-49) extending between the honeycomb corrugated layers 21 and 22 (Fig. 2 and Col. 2, lines 17-42) to measure the wall temperature of the catalytic converter (Col. 3, lines 55-60) but also teaches the conductors is embedded in the ceramic walls (Col. 2, lines 25-30). The sensor embedded between the metallic walls in the Maus '746 is one of the preferred embodiments but is not limited to other materials including ceramic material because Maus '746 teaches that the sensor can be embedded in between layers, which can withstand high temperature and corrosion-proof material (Col. 2, lines 17-21) including ceramic material.

Analyzing the Examiner's comments, it can be seen that the Examiner argues that Maus teaches conductors embedded in ceramic walls in Column 2, lines 25-30 thereof.

However, it is respectfully noted that the Examiner has misread the Maus reference in this regard.

The statement found in column 2, line 28 of Maus regarding conductors being embedded into a layer of electrically insulating ceramic powder, is applicable to walls of a honeycomb structure which are made from metal.

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Therefore, Maus is only directed toward metallic honeycomb structures and since the ceramic powder is not built up with printed layers, there is no link to the Bauer reference.

It is noted that the corporate assignee of the Maus patent is also the assignee of the instant application and Applicant therefore is in the best position to know the disclosure of the Maus reference.

In conclusion, the following must be stated with regard to the rejection of claims 5-7, 14 and 17-20 over Bauer in view of Maus:

it is clear that Bauer and Maus do not show at least one measuring sensor and/or an electrically conductive mass integrated into one ceramic wall, as recited in claim 5 of the instant application;

it is clear that Bauer can use different materials, but can only use one material (or one mixture) in one element at a time; and

it is clear that Maus does not have ceramic walls all being entirely formed of printed layers, but instead uses ceramic powder in metallic walls.

It is accordingly believed to be clear that neither the Bauer nor the Maus references, whether taken alone or in any combination, either show or suggest the features of claim 5. Claim 5 is, therefore, believed to be patentable over the art.

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The dependent claims are believed to be patentable as well because all of the dependent claims are ultimately dependent on claim 5.

In view of the foregoing, reconsideration and the issuance of a Notice of Allowance for claims 5-7, 14 and 17-20, are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

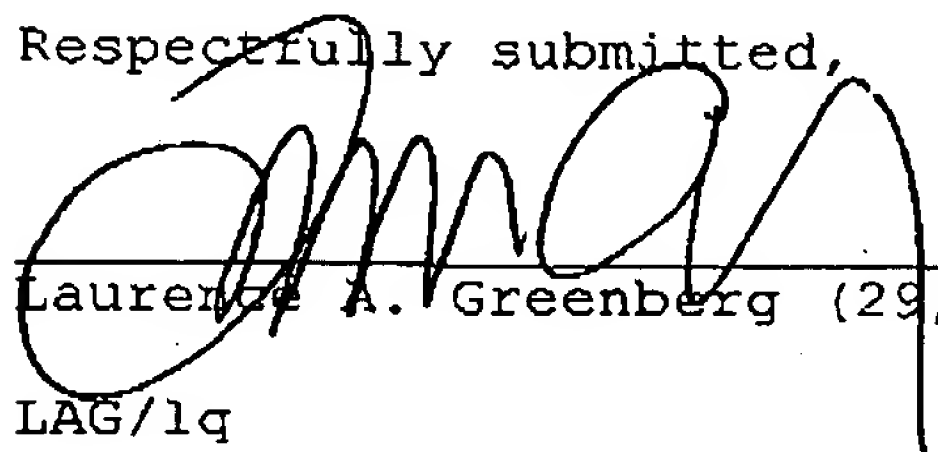
In the alternative, the entry of the amendment is requested, as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

If an extension of time is required, petition for extension is herewith made. Any extension fee associated therewith should be charged to Deposit Account Number 12-1099 of Lerner Greenberg Stemmer LLP.

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Please charge any other fees that might be due with respect
to Sections 1.16 and 1.17 to Deposit Account Number 12-1099
of Lerner Greenberg Stemer LLP.

Respectfully submitted,



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